REMARKS/ARGUMENTS

The Status of the Claims.

Claims 1 to 3, 5 to 16 and 20 to 24 are pending with entry of this amendment. Claim 23 is amended herein. This amendment introduces no new matter and support is replete throughout the specification. The amendment is made without prejudice and is not to be construed as abandonment of the previously claimed subject matter or agreement with any objection or rejection of record.

With respect to claim 23, the amendment merely provisos out retroviruses beyond the previously cited HIV. Support for this negative limitation is found throughout the specification, for example at paragraph 113. As cited in previous Responses, negative limitations are specifically provided for in MPEP 2173.05(i), *In re Johnson*, 558 F.2d 1008, 1019, 194 USPQ 187, 196 (CCPA 1977), and *Ex parte Parks,* 30 USPQ2d 1234, 1236 (1993).

Applicants submit that no new matter has been added to the application by way of the above Amendment. Accordingly, entry of the Amendment is respectfully requested.

35 U.S.C. §102.

Claims 23 and 24 have been previously rejected under 35 U.S.C. §102(b) as allegedly anticipated by Henderson (U.S. 6,001,555). Claims 1, 2, 5, 6, 10 to 12 and 20 to 24 were rejected under 35 U.S.C. §102(b) as allegedly anticipated by Grassetti (U.S. 4,378,364), as evidenced by Barber (U.S. 5,662,896) and Tagawa (Current Pharm. Design 6:681 (2000)). To the extent the rejection is deemed applicable to the amended claims, Applicants traverse.

In order for a reference to anticipate an invention, the reference must teach each and every element of the claimed invention. That is, in order for a reference to anticipate an invention, anticipation requires that "all limitations of the claim are found in the reference, or 'fully met' by it." *Kalman v. Kimberly-Clark Corp.*, 218 USPQ 781, 789 (Fed. Cir. 1983).

Henderson does not anticipate the claims. The rationale for the rejections of record is based on Henderson teaching administration of different compounds for treatment of a different disease. Henderson teaches *in vitro* HIV inactivation with certain identified compounds (not CPDS) by a mechanism of zinc finger attack against a specific HIV amino acid sequence. This clearly does not teach, e.g., identifying an individual, and treating an individual, other than an individual with a retrovirus infection, by administration of CPDS, by a mechanism of immune response modulation. The two technologies have nearly nothing in common except the mention of CPDS by Henderson in an unrelated context.

As noted in the previous Response, Henderson describes how certain compounds can inactivate retroviruses by attacking CCHC zinc fingers of the viral nucleocapsid. The Action alleges, in section 3, that Henderson "discloses the treatment of retroviruses including lentivirus and oncovirus [retroviruses], with disulfides, such as 6,6'-dithiodinicotinic acid." However, this is literally and certifiably incorrect. Further, assuming it were correct, it still would not describe the present invention and would not state a case.

As a preliminary matter, Henderson teaches only that "those compounds which **inactivate retroviruses**, as determined by the methods described herein, can be used to treat retrovirally-mediated diseases...." See, column 13, line 50; emphasis added. Here, the currently amended claims are unambiguously distinguished from the teachings of Henderson; the claims specifically exclude administration to individuals, e.g., for treatment of retrovirus infections. Therefore, the claims are not anticipated and the rejections based on Henderson must be withdrawn.

Moreover, additional reasons exist why Henderson does not anticipate the claims. As discussed in previous Responses, Henderson may suggest administration of "compounds ... which inactivate retroviruses, as determined by the methods described herein ... can be sued to treat retrovirally mediated diseases ..." However, none of the compounds of claim 23 are among those actually determined by the methods described in the Henderson patent to inactivate the viruses. Inactivation of viruses in Henderson is only determined by one assay - the tissue culture infectivity assay (see column 20, line 53, referring to the inactivation assay of Example 3). Careful reading of Henderson shows that, e.g., at Table 2 "Disulfide Reagents" 6,6'-dithiodinicotinic acid [CPDS] is not shown to inactivate the virus

(see Protein (virus) column associated with the tissue culture infectivity assay). Other compounds are offered as inactivating the retrovirus of the assay (specifically HIV), but Henderson unambiguously does not show determination of CPDS therein to inactivate a virus. Nowhere in Henderson is CPDS determined to inactive a retrovirus. Therefore, according to the unambiguous statements of Henderson as cited in the Action (column 13, line 51), 6,6'-dithiodinicotinic is clearly not taught as useful to treat retrovirally-mediated diseases.

No reading of claims 6 (incomprehensibly drafted and not representing any real compounds) and 7 of Henderson can reasonably be interpreted to show the compounds were actually, necessarily, or inherently determined to inactivate the virus by the methods identified by Henderson, so those compounds, not otherwise shown to inactivate the virus, e.g., in table 2, are literally and unarguably not taught as usable in the treatment, e.g., of AIDS patients. In any case, the point is moot, for now, because the present claims are not directed to treatment of retrovirus mediated diseases.

Because Henderson does not teach: 1) administration of any listed compound of claim 23 to any individual, and 2) does not teach administration of anything to individuals other than those infected with a retrovirus, it can not be considered to anticipate the present claims. Applicants respectfully request withdrawal of the rejections based on Henderson.

Grassetti '364 does not anticipate the claims. Grassetti '364 describes treatment of cancer patients with CPDS following surgery to induce a feeling of well-being, pain reduction and increased appetite. Barber and Tagawa discuss an array of alternate techniques in cancer treatment including theory and problems associated with immunotherapy of cancers.

The previous Office Actions acknowledge Grassetti '364 does not teach at least the limitations of immunomodulation or identifying an individual in need of immune response modulation. The Action falls back on "inherency" arguments to allegedly find these limitations not taught by Grassetti '364.

Controlling case law requires that for an aspect to be inherent in prior art, the aspect must necessarily be present in all embodiments. See, e.g., *In re Best*, 195 USPQ 430; *Ex parte Levy*, 17 USPQ2d 1461; and, *Continental Can Co. USA v. Monsanto Co.*, 20

USPQ2d 1746. For example, according to *Continental Can* missing descriptive matter must necessarily be present in the thing described in the reference.

The Action at section 9 states "'identifying an individual in need of immune response modulation;' is inherently met by the method of treating cancer patient disclosed in the reference, as [all?] cancer patients are recognized as [necessarily?] 'in need of immune response modulation' See, the abstract in Tagawa and columns 1-2 in Barber, et al." Applicants note again that this does not state a *prima facie* case and request this issue be openly and completely addressed head-on by the Office, should this line of rejection continue. A case would require a clear showing of, e.g., facts supporting an allegation that all cancer patients are in necessarily need of immune response modulation. As discussed below, in a fact-based analysis, such an allegation is clearly false and the rejection must be withdrawn.

One skilled in the art understands, and all references cited by the Office make it clear, that not all cancer patients are in need of immune response modulation. In general, it is known that most cancers are the result of a genetic error and are thus in need of genetic correction. In most cases, cancer cells repair genetic errors, such as those from background radiation damage to nucleic acids, and revert naturally to normal cells, without the need for immunomodulation. It is known that many cancer cells arise in all of us over the course of our lives and are typically removed by normal unmodulated immune responses and other natural corrective systems, again without the need for modulation of the normal immune response. Even advanced cancers are known to spontaneously revert by normal immune responses without interference of an immune response modulation. In many cases, immune response modulation can be toxic or counter-productive; clearly, such a modulation is not needed by the individual exposed to the modulation. There are extensive examples of individuals having a cancer for whom immune response modulation is not necessary. Because it is unarguably recognized not all cancer patients are as in need of immune response modulation, e.g., for the many reasons discussed above, the need is not inherent in the cited references. Therefore, Grassetti '364 does not anticipate any of the present claims.

Tagawa, in the abstract cited by the Office, states that modulation of immune responses "is one of the strategies for cancer therapy. ... However, cytokines may induce

toxic reactions or produce no substantial effects ..." Tagawa also notes that cancers can result from immunological disorders or defects of a host immunosurveilance system, but this acknowledges the fact that most cancers arise in individuals without such defects. In Figure 1, Tagawa shows how an unmodulated immune system normally works to cure cancer patients with, e.g., natural antigen presenting cells (APCs) activating cytotoxic T-lymphocytes (CTLs) to provide a normal CTL-mediated unmodulated immune response against a tumor *in vivo*. This is a clear demonstration that immune modulation is not necessarily needed by cancer patients. The cited references teaches that a need for immune response modulation is not inherent in all individuals with a cancer.

Barber, at columns 1 and 2 cited by the Office, makes it clear that cancer patients are not necessarily in need of immune modulation. For example, at column 1, line 35, Barber suggests that 30% of patients treated with surgery alone will have no recurrence. These cancer patents were not treated with immune modulators and did not need them. Chemotheraphies and radiation therapies also have success without resort to immunomodulation. Even the specific invention of Barber does not require immune modulators to treat cancer patients. For example, in the paragraph traversing columns 2 and 3, Barber optionally identifies toxins or antisense technology for direct administration to a tumor, without immune modulation. The evidence goes on to clearly demonstrate the Office would be incorrect in asserting that all cancer patients are necessarily in need of immune modulation. The need for immune modulation is not inherent in cancer patients and the rejections must be withdrawn.

At section 9 of the Action, the claim limitation "identifying" is somehow found in the incorrect and insufficient allegation that "cancer patients are recognized as 'in need of immune response modulation." Even if the statement were true, and it is not (as discussed above), it would not demonstrate Grassetti teaching, e.g., identifying an individual in need of an immune response modulation. For example, Grassetti does not appear to teach any method step or characteristics for identifying anything, let alone an individual in need of immune response modulation. Even if Grassetti suggested identifying a cancer patient (and he does not) this still would not actually or inherently teach identifying an individual in need of immune response modulation, as discussed above.

Grassetti '364 does not actually or inherently teach at least the limitations of identifying an individual in need of an immune response, or administering CPDS to an individual in need of immune response modulation. What's more, Grassetti teaches away from the limitations. The Barber and Tagawa references offered by the Office only confirm that the limitations are not inherently taught by Grassetti. Applicants respectfully request withdrawal of the rejections for alleged anticipation by Grassetti '364.

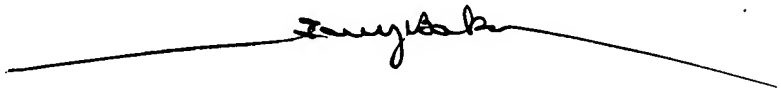
CONCLUSION

In view of the foregoing, Applicants believes all claims now pending in this application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the claims are deemed not to be in condition for allowance after consideration of this Response, a telephone interview with the Examiner is hereby requested. Please telephone the undersigned at (510) 769-3510 to schedule an interview.

QUINE INTELLECTUAL PROPERTY LAW GROUP
P.O. BOX 458, Alameda, CA 94501
Tel: 510 769-510
Fax: 510 337-7877
PTO Customer No.: **22798**
Deposit Account No.: **50-0893**

Respectfully submitted,



Gary Baker
Reg. No: 41,595

Attachments:

1) A petition to extend the period of response for **1** month;
2) A transmittal sheet;
3) A fee transmittal sheet;
4) RCE Transmittal + 1 Copy; and,
5) A receipt indication postcard.